

ABSTRACT OF THE DISCLOSURE

Circuitry including a voltage regulator including a first stage and a second stage, wherein an output of the first stage is coupled to an input of the second stage, wherein current of the second stage is mirrored through a current path to a current mirror driver, the current mirror driver adapted to perform a first Class AB action including at least one of sourcing and sinking current from a voltage supply VPP, wherein an output of the current mirror driver is connected to an output of the voltage regulator, and a first circuit connected to the current path and adapted to sample current in the current path, wherein during steady state current in the current path, the first circuit provides negligible current to the output of the voltage regulator, and during transient current conditions, the first circuit performs a second Class AB action complementary to the first Class AB action including at least one of sinking and sourcing current from the voltage supply VPP.